

What is claimed is

- 5 1. A method of transmitting, via a synchronous digital transport network, a frame-structured synchronous multiplex signal, composed of frames having a payload section and an overhead section, in the payload section of which multiplex units are multiplexed according to a multiplex hierarchy, comprising the step of transmitting a frame to be transmitted, including its unchanged overhead section, as payload in a concatenation of newly formed multiplex units.
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- 15 2. A method according to Claim 1 further comprising the steps of:
- creating a number of new multiplex units of the same size, and concatenating these new multiplex units to form a virtual concatenation,
 - 20 - packing the frame, including the overhead section thereof, in payload sections of the concatenated new multiplex units,
 - creating at least one new frame and embedding the concatenated new multiplex units in the payload section thereof, and
 - 25 - transmitting the at least one new frame via the synchronous transport network.
3. A method according to Claim 1, wherein the synchronous transport network is a SDH network, wherein the frames are synchronous transport modules of the type STM-N where $N = 1, 4, 16$ or 64 , wherein the multiplex units are virtual containers of the type VC-N where $N = 11, 12, 2, 3$, or 4 or contiguously concatenated virtual containers of the type VC-4-Nc where $N = 4$ or 16 , and wherein the newly formed multiplex units are virtual containers of the type VC-N where $N = 3$ or 4 .
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9. A multiplexer for a synchronous digital transport network comprising:
- at least one tributary input for receiving a first frame-structured synchronous multiplex signal being composed of first frames each having a payload section and an overhead section, in the payload sections of which multiplex units are inserted in accordance with a multiplex hierarchy,
 - a multiplex device, connected to the tributary input, for creating new multiplex units, for concatenating the newly formed multiplex units to form a concatenation, and for packing a received frame, including the unchanged overhead sections thereof, as payload in the concatenation of the newly formed multiplex units, and
 - at least one output for creating and transmitting a second, frame-structured synchronous multiplex signal composed of second frames in whose payload sections the concatenated, newly formed multiplex units are inserted.
10. A multiplexer according to Claim 9 comprising a switching matrix for selectively switching of multiplex units, wherein the multiplex device is connected to a matrix input and the output is connected to a matrix output.